

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) An isolated and purified nucleic acid molecule that encodes a mammalian histamine H4 receptor protein, said nucleic acid molecule comprising a member selected from the group consisting of:

(a) a ~~nucleic acid molecule~~ polynucleotide encoding a polypeptide comprising amino acids 1 to 391 of SEQ ID NO:8; and

(b) a ~~nucleic acid molecule~~ polynucleotide which is complementary to the polynucleotide of (a);

~~(c) a nucleic acid molecule comprising at least 15 sequential bases of the polynucleotide of (a) or (b); and~~

~~(d) a nucleic acid molecule that hybridizes under stringent conditions to the polynucleotide molecule of (a).~~

2. (original) The nucleic acid molecule of claim 1 wherein the polynucleotide is RNA.

3. (original) The nucleic acid molecule of claim 1 wherein the polynucleotide is DNA.

4. (currently amended) The isolated and purified nucleic acid molecule of claim 1 having a the nucleotide sequence of SEQ ID NO:5.

5. (canceled)

6. (original) An expression vector for expression of a mammalian histamine H4 receptor protein in a recombinant host, wherein said vector contains a nucleic acid sequence encoding a mammalian histamine H4 receptor protein having an amino acid sequence of SEQ ID NO:8.

7. (currently amended) The expression vector of claim 6, wherein the expression vector contains a nucleic acid molecule having the nucleotide sequence of SEQ ID NO:5, and encodes ~~encoding~~ a mammalian histamine H4 receptor protein ~~having a nucleotide SEQ ID NO:5.~~

8. (canceled)

9. (currently amended) A recombinant host cell containing a recombinantly cloned nucleic acid molecule encoding a mammalian histamine H4 receptor protein having ~~an~~ the amino acid sequence of SEQ ID NO:8

10. (currently amended) The recombinant host cell of claim 9, wherein said nucleic acid molecule has a the nucleotide sequence SEQ ID NO:5.

11. (canceled)

12. (previously presented) A substantially pure histamine H4 receptor encoded by the nucleic acid molecule of claim 1.

13. (currently amended) The ~~protein~~ histamine H4 receptor according to claim 12, having ~~an~~ the amino acid sequence SEQ ID NO:8.

14-15. (canceled)

16. (original) A process for expression of mammalian histamine H4 receptor protein in a recombinant host cell, comprising:

- (a) transferring the expression vector of Claim 6 into suitable host cells; and
- (b) culturing the host cells of step (a) under conditions which allow expression of the mammalian histamine H4 receptor protein from the expression vector.

17-25. (canceled)